

## ABSTRACT OF THE DISCLOSURE

A viewing transform matrix indicating a position and a orientation of an HMD is generated according to a signal  
5 indicating the position and the orientation of the HMD. On the other hand, a landmark and its position are detected based on a captured picture, and a correction matrix  $\Delta M_c$  is generated based on the detected position of the landmark. The position and orientation of the HMD is corrected by  
10 using a viewing transform matrix and a correction matrix  $\Delta M_c$  generated in the above mentioned processes, a picture of a virtual object is generated according to an external parameter indicating the corrected position and the orientation of the HMD, and a picture of augmented reality  
15 is generated. The generated picture of the augmented reality is displayed on a display unit.